Designing a Course on Adaptive Water Management (AWM)

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Introduction

In the NeWater project, the online curriculum on Adaptive River Basin Management has been developed on the premise that university curricula need to be adapted in order to reflect the changes in water management theory and practice towards adaptive water management. As learning is a combination of knowledge acquisition, skills development and in some cases a shift in attitude, a change in water management curricula does not only entail a knowledge component (adding information), but also advances in skills and changes in attitude.

This document provides some guidance for adapting existing curricula/courses or designing a new curriculum and/or courses that address adaptive water management. A prerequisite for using this guidance document is familiarity with the introduction to adaptive water management (Module 2 of the NeWater online curriculum) and (some) experience with course design and/or teaching. With regard to the latter, the chapter 'Training' in Snellen, et. al. (2005) is advised as background reading.

The authors make a distinction between course and curriculum. The focus of this guidance is on the (re-)design of a *course*. A course is defined here as a unit of instruction in one subject, usually taking place in one academic term. A curriculum is the set of courses, and their content, offered at a school or university (wikipedia). We assume for our purposes that a course is developed from various *curriculum* elements.

Objectives

- The instructor formulates an approach to incorporate new knowledge in adaptive water management within an existing course or for the development of a new course – with learning being comprised of knowledge acquisition, skills development, and possible attitude shifts
- The instructor translates key issues in AWM into teaching activities

Expected outputs

- Proposals for a course based on the requirements of the participants/students.

Preparation required

- Those instructors without experience in course development are advised to read the chapter Training in Snellen, 2005 (reference in "How to Teach Adaptive Water Management" section of online curriculum.

Procedure

Step 1
- Formulate the objective of the course you wish to (re-)design.
- Take into account the different levels at which the objectives are formulated. A course has an overall goal, while each of the sessions has a specific goal in itself. The overall objective for a course is then, in a manner of speaking, the sum of the specific objectives per day / per session. Formulate competencies / learning goals for the different levels of the course you are (re-) designing.
- Specify the learning goals per session including a knowledge component, skills component, and attitude component. Identify teaching activities related to the different components. The online curriculum may be useful here.

Step 2
- Prepare in more detail a part of the course you designed in step 1. This can include preparing a slide presentation for a lecture, an assignment and questions for discussion, etc.
- Reflect on how uncertainty, vulnerability, and adaptive capacity are addressed in your course.
- Adapt your course as needed to the local and/or regional context.

Information/Support for course preparations

- Information on the NeWater Project: www.newater.info
- The online curriculum developed in the NeWater project can currently be found at
  www.newatereducation.nl
- Chapter 2 on Training in Snellen, 2005 gives information about curriculum design, in light of changes in water management and learning. Details: Snellen, W.B., C.T.H.M. Terwisscha van Scheltinga & A. Schrevel, 2005 Working with farmers. Towards a service approach in irrigation. Training. The socio-economic base line survey, 08 Feb 2005, 144 pp
  http://www2.alterra.wur.nl/Webdocs/PDFFiles/Alterrarapporten/AlterraRapport1096.pdf
- Giving and receiving feedback
  http://humanresources.about.com/cs/communication/ht/receivefeedback.htm
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